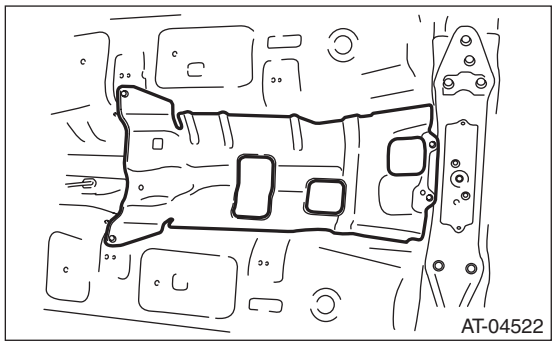
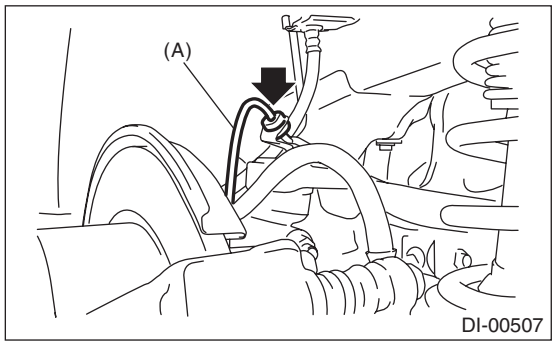
4. Rear Differential

A: REMOVAL

1) Set the vehicle on a lift.
2) Disconnect the ground cable from battery.
3) Shift the select lever or gear shift lever to neutral.
4) Release the parking brake.
5) Loosen the wheel nuts.
6) Lift up the vehicle.
7) Remove the wheels.
8) Drain differential gear oil. <Ref. to DI-16, REPLACEMENT, Differential Gear Oil.>
9) Remove the rear exhaust pipe and muffler.
• Non-turbo model
<Ref. to EX(H4SO)-10, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4SO)-12, REMOVAL, Muffler.>
• Turbo model
<Ref. to EX(H4DOTC)-14, REMOVAL, Rear Exhaust Pipe.> <Ref. to EX(H4DOTC)-16, REMOVAL, Muffler.>
10) Remove the heat shield cover.

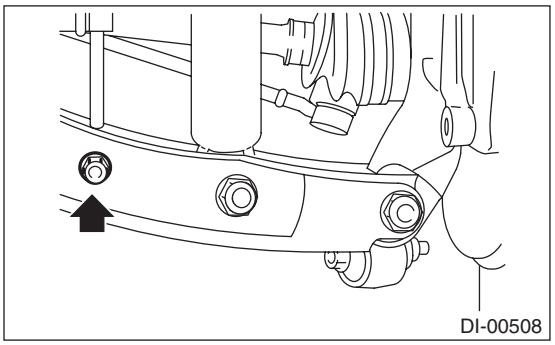


11) Remove the propeller shaft. <Ref. to DS-10, REMOVAL, Propeller Shaft.>
12) Remove the DOJ of rear drive shaft from rear differential.
(1) Remove the ABS wheel speed sensor cable from the clamp.

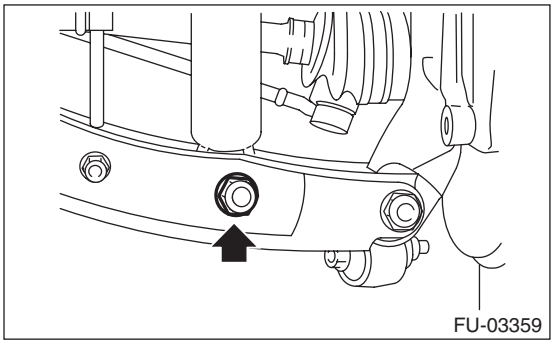


(A) ABS wheel speed sensor cable

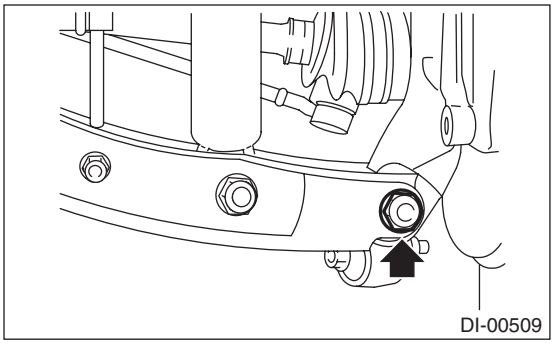
(2) Remove the bolts which secure the rear stabilizer link to the rear lateral link.



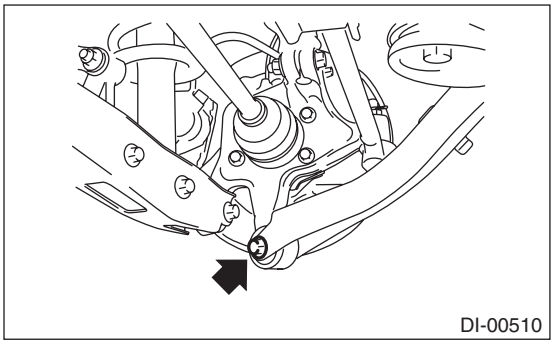
(3) Remove the bolts which secure the shock absorber to the rear lateral link.



(4) Remove the bolts which secure the rear lateral link to the housing.

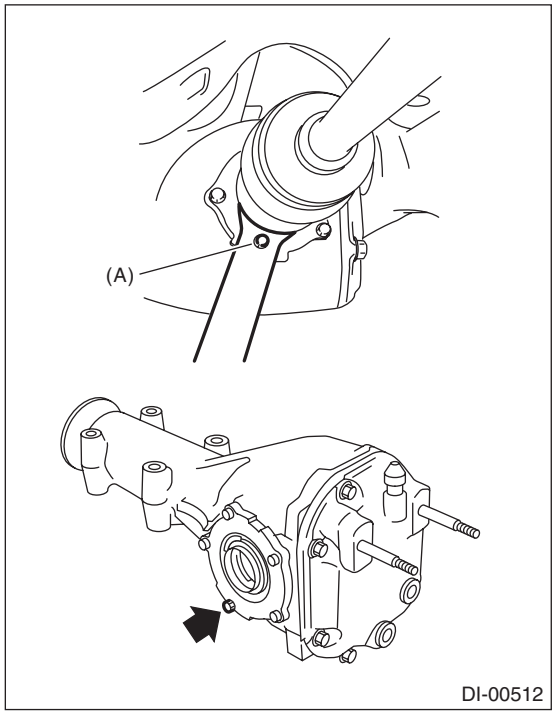


(5) Remove the bolts which secure the trailing link to the housing.



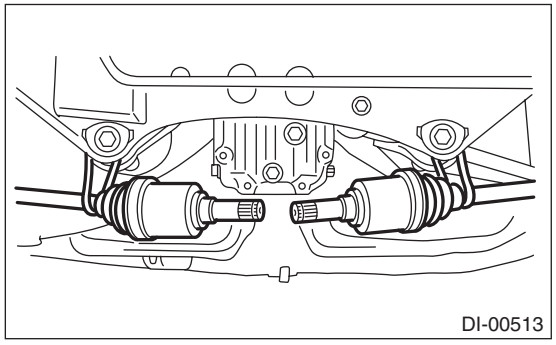
(6) Remove the DOJ from the rear differential by using ST.

NOTE:
When removing the DOJ from the rear differential, fit the ST to the bolts as shown in the figure so as not to damage the side retainer.
ST 28099PA100 DRIVE SHAFT REMOVER

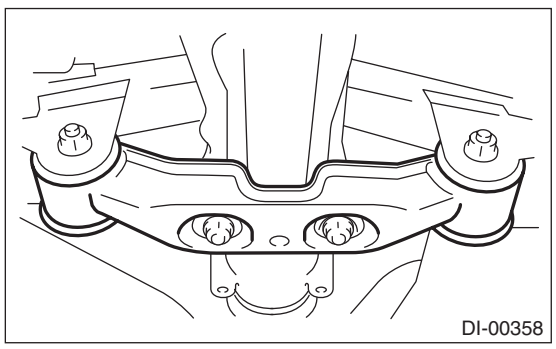


(A) Bolt

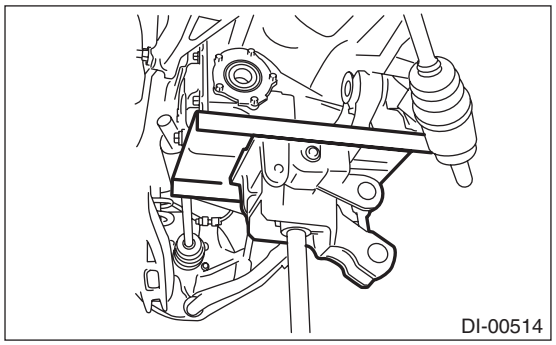
13) Suspend the rear drive shaft to the rear crossmember using wire.



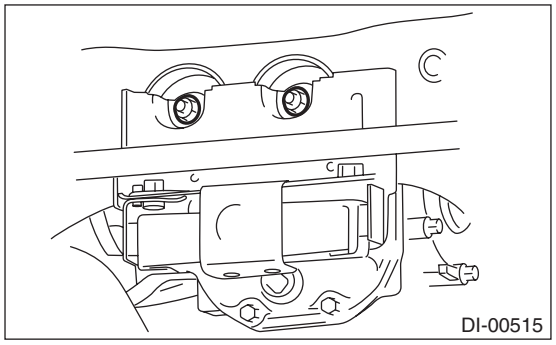
14) Remove the rear differential front member.



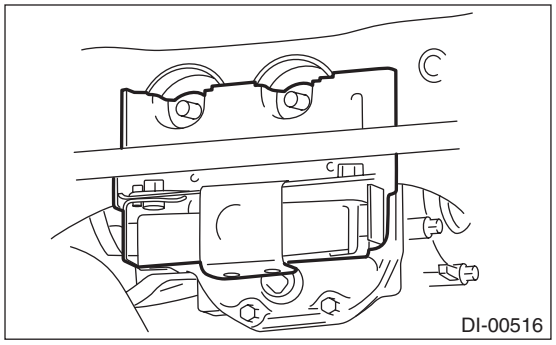
15) Support the rear differential with the transmission jack.



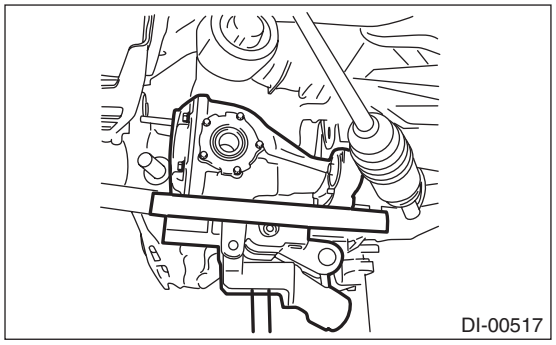
16) Remove the self-lock nuts which hold the rear differential to the rear crossmember.



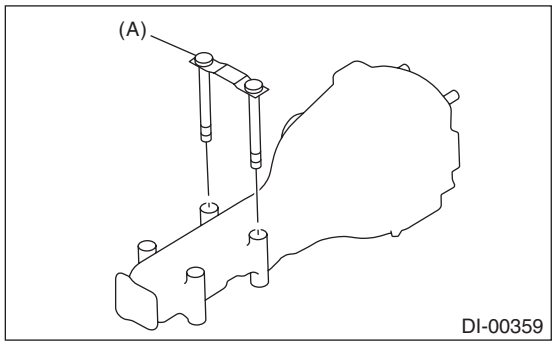
17) Remove the dynamic damper assembly. (5 door AT model)



18) While slowly lowering the transmission jack, move the rear differential forward, and remove the rear differential from the vehicle.



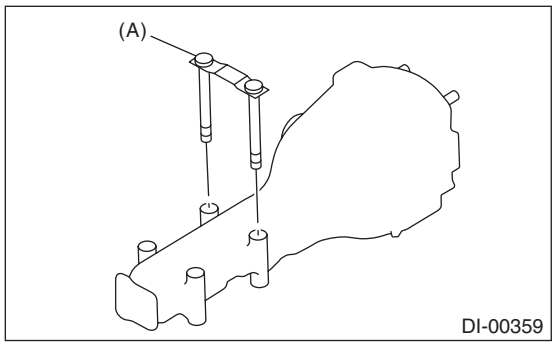
19) Remove the rear differential member plate from the rear differential.



(A) Rear differential member plate

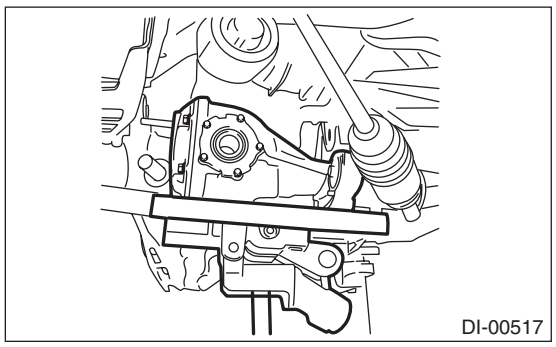
B: INSTALLATION

1) Attach the rear differential member plate to the rear differential.

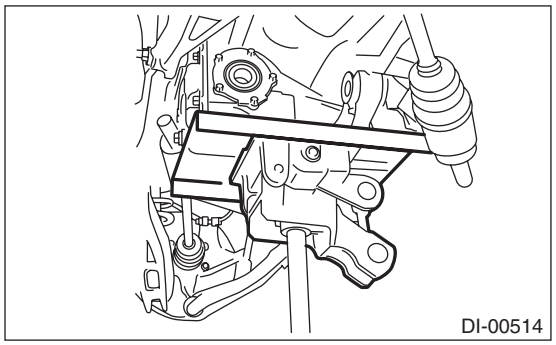


(A) Rear differential member plate

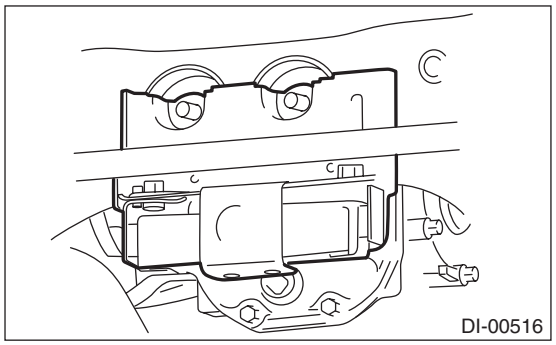
2) Set the rear differential to transmission jack.
3) Adjust the transmission jack and properly insert the rear differential stud bolt into rear crossmember bushing.



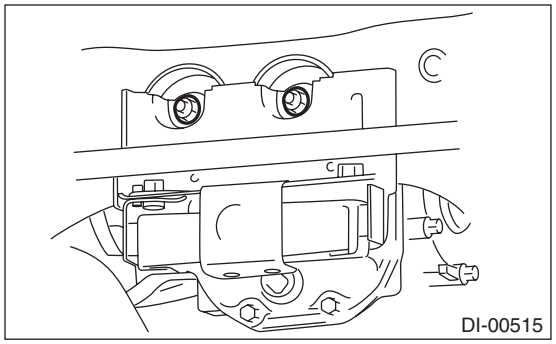
4) After inserting the rear differential stud bolt into the rear crossmember bushing, lift up the transmission jack and align the rear differential to its attachment position.



5) Install the dynamic damper assembly. (5 door AT model)

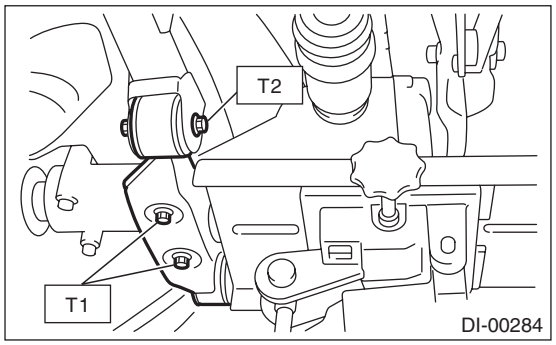


6) Tighten a new self-locking nut temporarily to rear crossmember.



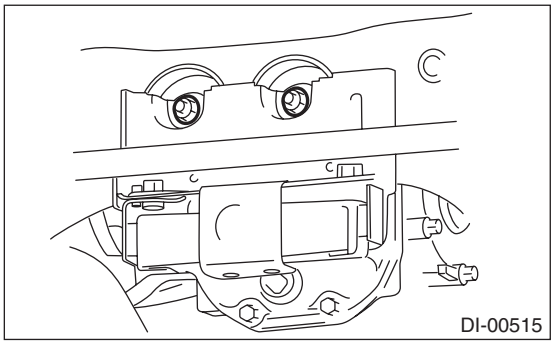
7) Install the rear differential front member with a new self-locking nut.

Tightening torque:
T1: 50 N·m (5.1 kgf-m, 36.9 ft-lb)
T2: 110 N·m (11.2 kgf-m, 81.1 ft-lb)

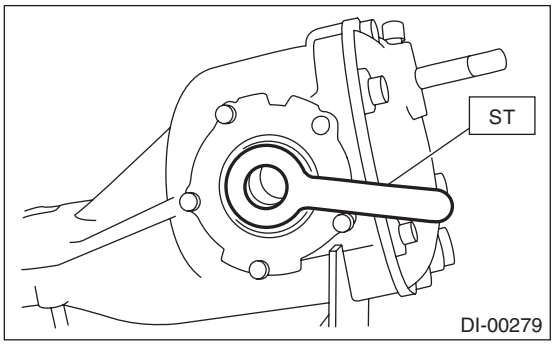


8) Tighten the self-locking nut.

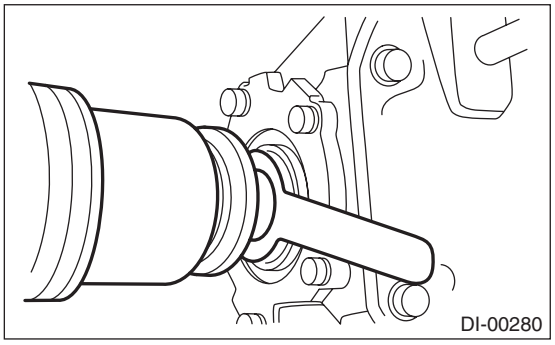
Tightening torque:
70 N·m (7.1 kgf-m, 51.6 ft-lb)



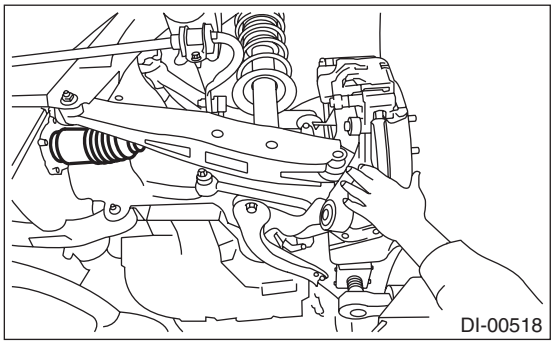
9) Attach the ST to rear differential.
ST 28099PA090 OIL SEAL PROTECTOR



10) Insert the spline shaft until the spline portion comes inside the side oil seal.



11) Remove ST from rear differential.
12) Push the housing to fully insert the DOJ into the rear differential.

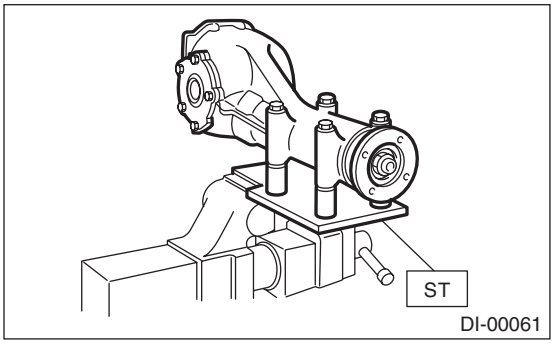


13) Lower the transmission jack.
14) Installing procedure hereafter is in the reverse order of removal.
15) After installing, fill the differential carrier with gear oil up to the bottom of the filler plug hole. <Ref. to DI-16, Differential Gear Oil.>
16) Inspect the wheel alignment and adjust if necessary.

C: DISASSEMBLY

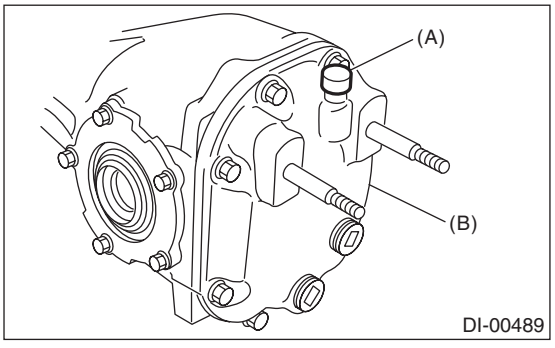
To detect the real cause of trouble, inspect the following items before disassembling.
- Tooth contact and backlash between hypoid driven gear and drive pinion
- Hypoid driven gear runout on its back surface
- Total preload of drive pinion

1) Set the ST on vise and install the differential assembly to ST.
ST 398217700 ATTACHMENT



2) Remove the oil drain plug and filler plug, and drain the gear oil.
3) Remove the air breather cap.

NOTE:
- Do not attempt to replace the air breather cap unless necessary.
- Whenever the air breather cap is removed, replace it with a new part.

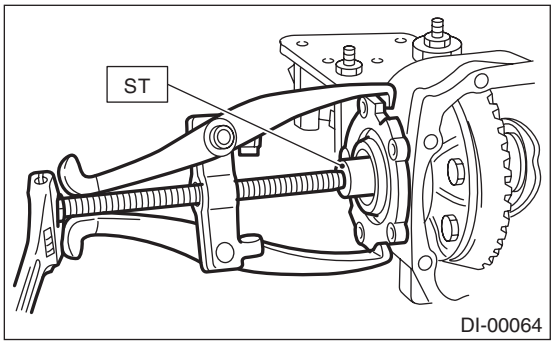


(A) Air breather cap
(B) Rear cover

4) Remove the bolts, and then remove the rear cover.

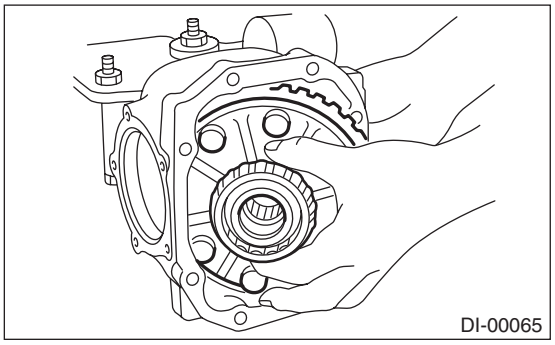
5) Keep the side retainers separate to make it possible to identify RH and LH sides. Remove the side retainer attachment bolts, set the ST to differential case, and extract the side retainers RH and LH with a puller.

NOTE:
• Side retainer shim of each side should be kept together with its mating retainer.
• Keep the side retainers separate with tags to make it possible to identify RH and LH sides.
ST 398457700 ATTACHMENT

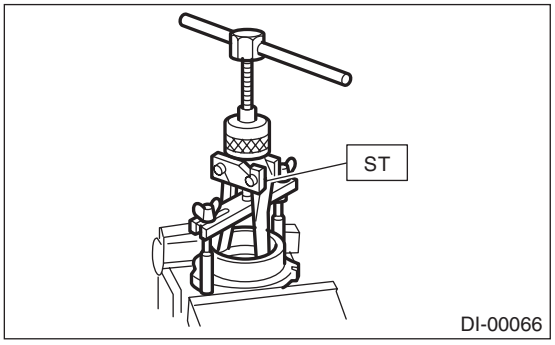


6) Pull out the differential case assembly from the differential carrier.

NOTE:
Be careful not to hit the hypoid driven gear teeth against the case.

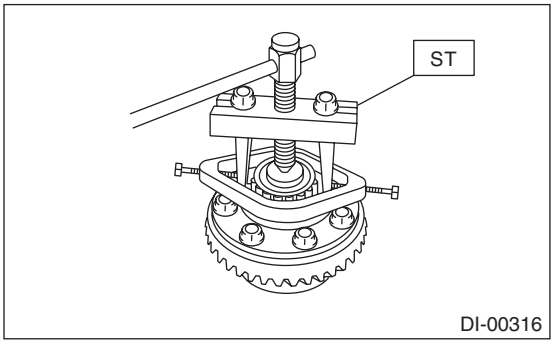


7) When replacing the side bearing, remove the bearing cup from the side retainer using ST.
ST 398527700 PULLER ASSY

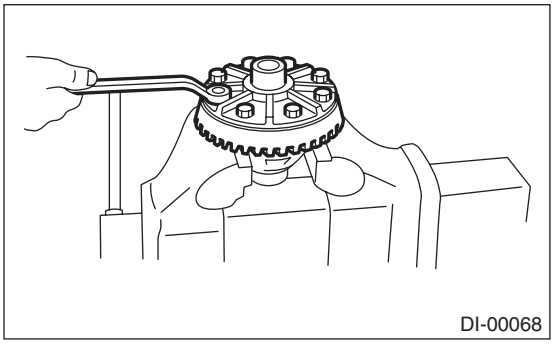


8) Remove the bearing cone with ST.

NOTE:
• Do not attempt to disassemble the parts unless necessary.
• Set the puller so that its claws catch the edge of the bearing cone.
• Never mix up the RH and LH bearing races and cones.
ST 18759AA000 PULLER ASSY

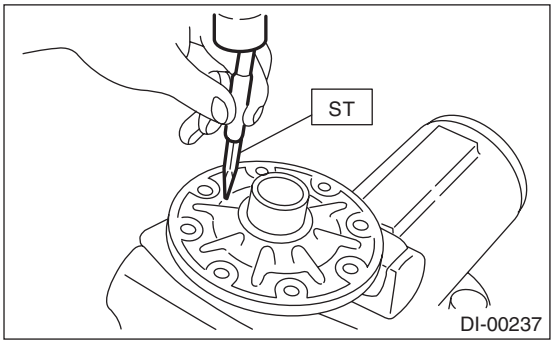


9) Remove the hypoid driven gear by loosening hypoid driven gear bolts.



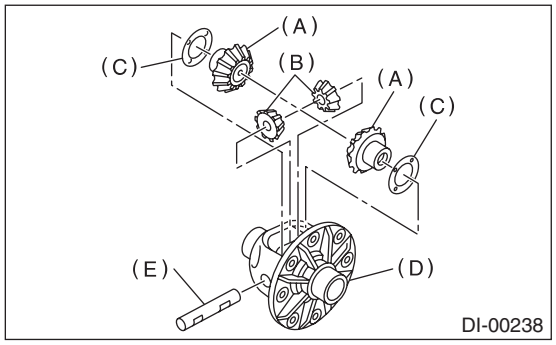
10) Drive out the pinion shaft lock pin from the hypoid driven gear side.

NOTE:
The lock pin is staked at the pin hole end on the differential carrier. Do not drive it out forcibly before removing the stake.
ST 899904100 STRAIGHT PIN REMOVER



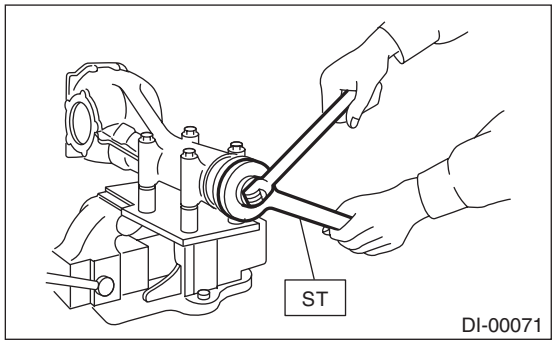
11) Draw out the pinion mate shaft and remove pinion mate gears, side gears and thrust washers.

NOTE:
The gears should be marked or kept separated right and left, and front and rear as well as thrust washers.

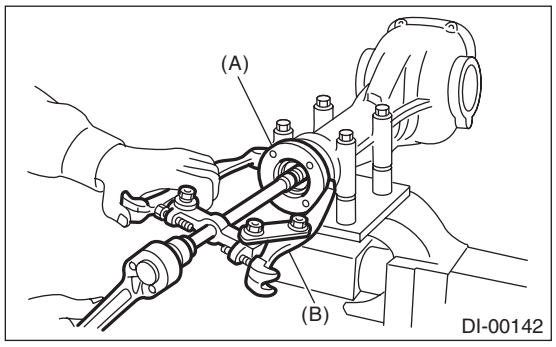


(A) Side gear
(B) Pinion mate gear
(C) Thrust washer
(D) Differential case
(E) Pinion mate shaft

12) Remove the self-locking nut while holding the companion flange with ST.
ST 498427200 FLANGE WRENCH



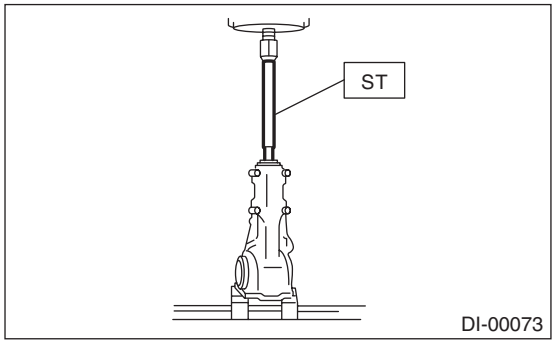
13) Extract the companion flange with a puller.



(A) Companion flange
(B) PULLER

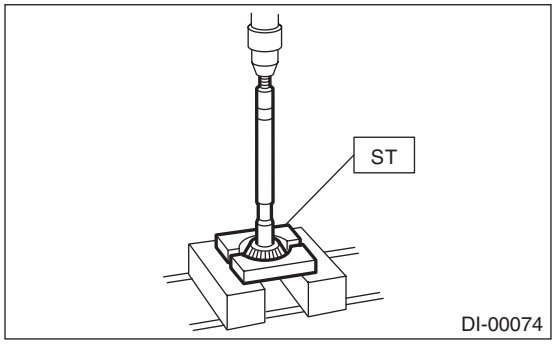
14) Press the end of drive pinion shaft and extract it together with rear bearing cone, pinion height adjusting washer and washer.

NOTE:
Hold the drive pinion so as not to drop it.
ST 398467700 DRIFT

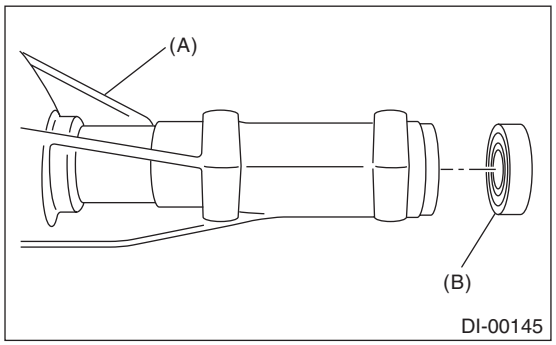


15) Remove the rear bearing cone from drive pinion by supporting the cone with ST.

NOTE:
Place the replacer so that its center-recessed side faces the pinion gear.
ST 398517700 REPLACER

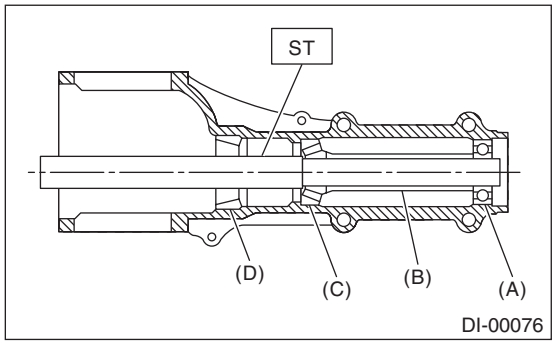


16) Remove the front oil seal from differential carrier using ST.
ST 398527700 PULLER ASSY



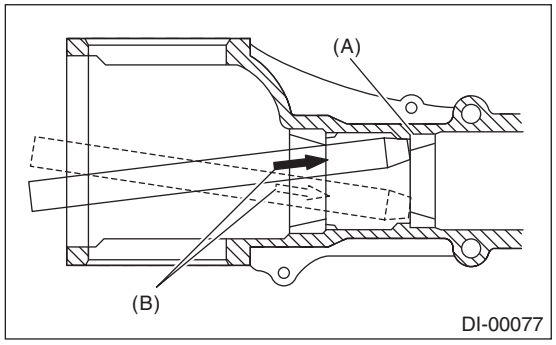
(A) Differential carrier
(B) Front oil seal

17) Remove the pilot bearing together with the front bearing cone and spacer using the ST.
ST 398467700 DRIFT



(A) Pilot bearing
(B) Spacer
(C) Front bearing
(D) Rear bearing cup

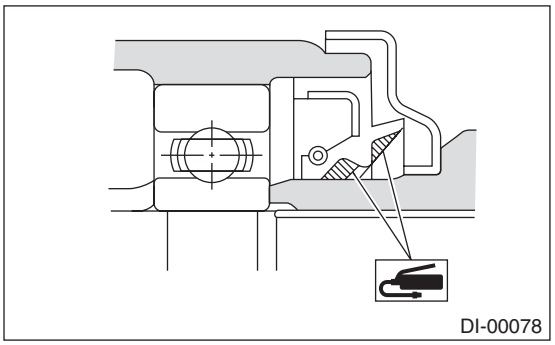
18) When replacing the bearings, use a brass bar to tap out the front bearing cup and rear bearing cup (in this order).



(A) 2 cutout portions along diagonal lines
(B) Tap alternately with brass bar.

D: ASSEMBLY

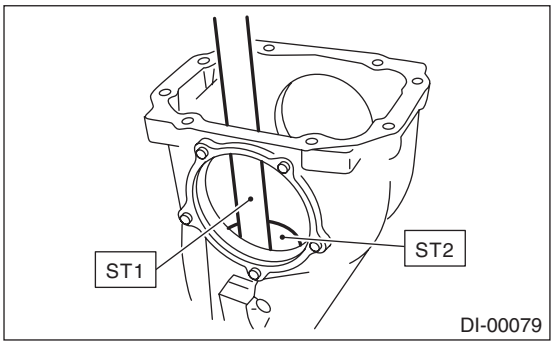
NOTE:
• Assemble in the reverse order of disassembly.
• Check and adjust each part during assembly.
• Keep the shims and washers in order, so that they are not improperly installed.
• Thoroughly clean the surfaces on which the shims, washers and bearings are to be installed.
• Apply gear oil when installing the bearings and thrust washers.
• Be careful not to mix up the RH and LH bearing races.
• Use a new O-ring and gasket.
• Replace the oil seal with a new part at every disassembly.
• Be careful not to mix up the oil seal RH and LH.
• Apply differential gear oil to the lips when installing the oil seal.



1) Adjusting preload for front and rear bearings

NOTE:
Adjust the bearing preload between front and rear bearings with spacer and washer. Pinion height adjusting washer is not affected by this adjustment. The adjustment must not be carried out with oil seal inserted.

(1) Install the rear bearing race into the differential carrier using ST1 and ST2.
ST1 398477701 HANDLE
ST2 398477703 DRIFT 2



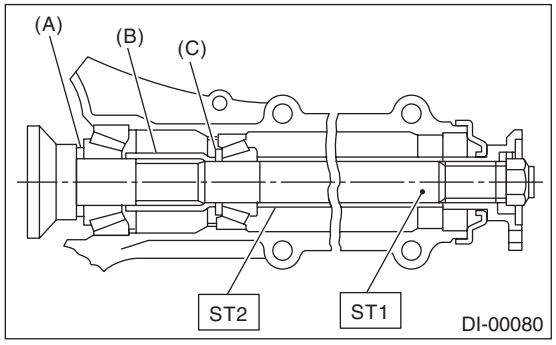
(2) Install the front bearing race to the differential carrier using ST1 and ST2.
ST1 398477701 HANDLE
ST2 398477702 DRIFT

(3) Insert the ST1 into carrier with the pinion height adjusting washer and rear bearing cone fitted onto it.

NOTE:
• If tooth contact (drive pinion, hypoid driven gear) is normal in the inspection before disassembling, verify that the washer is not deformed, and then reuse the used washer.
• Use new rear bearing cone.

(4) Install the preload adjusting spacer and washer, front bearing cone, ST2, companion flange, washer and self-locking nut.

ST1 398507702 DUMMY SHAFT
ST2 398507703 DUMMY COLLAR



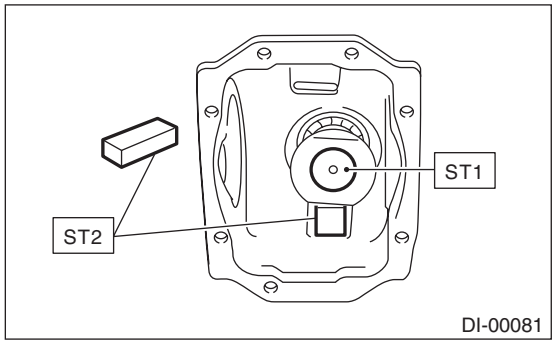
(A) Pinion height adjusting washer
(B) Preload adjusting spacer
(C) Preload adjusting washer

(5) Turn the ST1 by hand to smooth the bearing, and tighten the self-locking nut while measuring the initial load or initial torque with a spring scale or torque wrench. Select the preload adjusting washer and spacer so that the specified preload is obtained when nut is tightened to the specified torque.

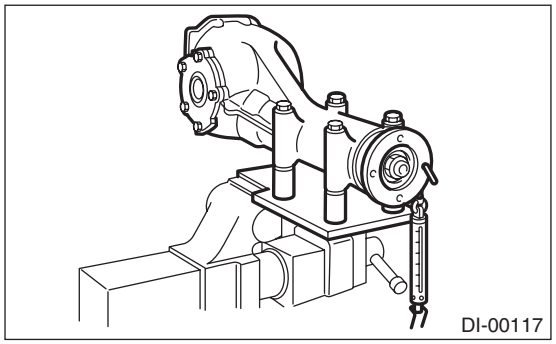
NOTE:
• Use a new self-locking nut.
• Measure the preload in direction of tangent to the flange.
• Be careful not to give excessive preload.
• When tightening the self-locking nut, lock ST1 with ST2 as shown in the figure.

ST1 398507702 DUMMY SHAFT
ST2 398507704 BLOCK

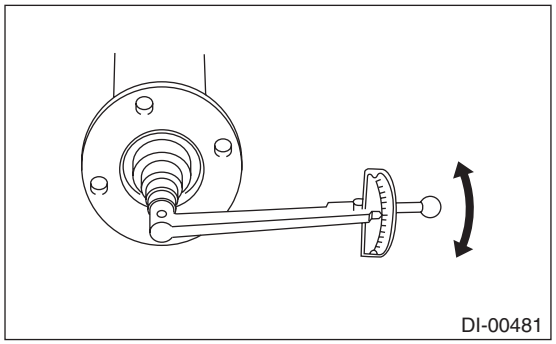
Tightening torque:
181.5 N·m (18.5 kgf-m, 133.9 ft-lb)



Initial load:
17.7 — 38.8 N (1.8 — 4.0 kgf, 4.0 — 8.7 lb)



Initial torque:
0.67 — 1.47 N·m (0.07 — 0.15 kgf-m, 0.49 — 1.08 ft-lb)



Preload adjusting washer	
Part No.	Thickness mm (in)
383705200	2.59 (0.1020)
383715200	2.57 (0.1012)
383725200	2.55 (0.1004)
383735200	2.53 (0.0996)
383745200	2.51 (0.0988)
383755200	2.49 (0.0980)
383765200	2.47 (0.0972)
383775200	2.45 (0.0965)
383785200	2.43 (0.0957)
383795200	2.41 (0.0949)
383805200	2.39 (0.0941)
383815200	2.37 (0.0933)
383825200	2.35 (0.0925)
383835200	2.33 (0.0917)
383845200	2.31 (0.0909)

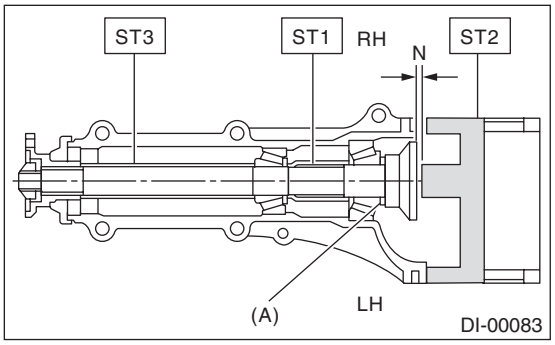
Preload adjusting spacer	
Part No.	Length mm (in)
383695201	56.2 (2.213)
383695202	56.4 (2.220)
383695203	56.6 (2.228)
383695204	56.8 (2.236)
383695205	57.0 (2.244)
383695206	57.2 (2.252)

2) Adjusting drive pinion height:
Adjust the drive pinion height with washer installed between the rear bearing cone and the back of pinion gear.

(1) Attach the ST2.

NOTE:
At this time, install a provisionally selected or previously used pinion height adjusting washer. Measure and record the thickness.

ST1 398507702 DUMMY SHAFT
ST2 398507701 DIFFERENTIAL CARRIER GAUGE
ST3 398507703 DUMMY COLLAR



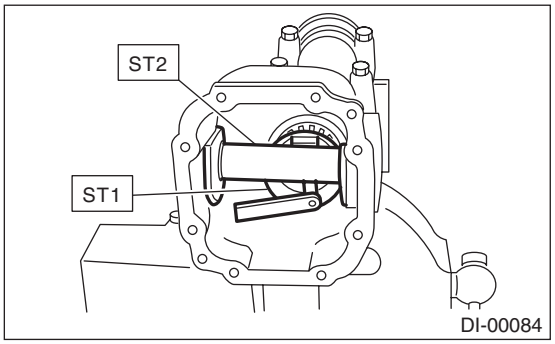
N Measured value

(A) Pinion height adjusting washer

(2) Measure the clearance “N” between the end of ST2 and the end surface of ST1 by using a thickness gauge.

NOTE:
Make sure there is no clearance between the case and ST2.

ST1 398507702 DUMMY SHAFT
ST2 398507701 DIFFERENTIAL CARRIER GAUGE



(3) Obtain the thickness of pinion height adjusting washer to be inserted from the following formula, and replace the temporarily installed washer with this one.
T = To + N – (H × 0.01) – 0.20 mm (0.0079 in)

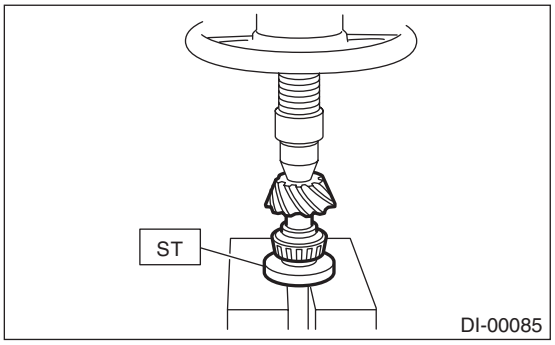
NOTE:
Use copies of this page.

T	Thickness of pinion height adjusting washer mm (in)
To	Thickness of washer temporarily inserted mm (in)
N	Clearance of thickness gauge mm (in)
H	Figure marked on drive pinion head
Memo:	

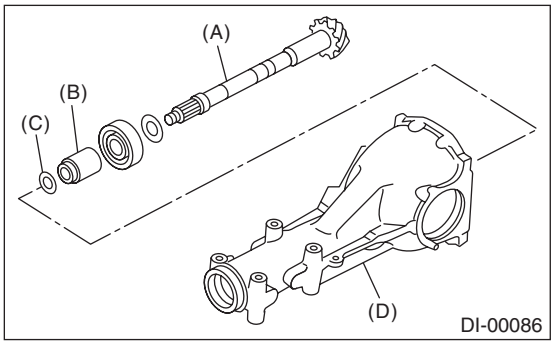
(Example of calculation)
To = 2.20 mm (0.0866 in) + 1.20 mm (0.0472 in) = 3.40 mm (0.1339 in)
N = 0.23 mm (0.0091 in)
H = + 1
T = 3.40 mm (0.1339 in) + 0.23 mm (0.0091 in) – 0.01 mm (0.0004 in) – 0.20 mm (0.0079 in) = 3.42 mm (0.1346 in)
Result: Thickness = 3.42 mm (0.1346 in)
Therefore use washer 383605200.

Pinion height adjusting washer	
Part No.	Thickness mm (in)
383495200	3.09 (0.1217)
383505200	3.12 (0.1228)
383515200	3.15 (0.1240)
383525200	3.18 (0.1252)
383535200	3.21 (0.1264)
383545200	3.24 (0.1276)
383555200	3.27 (0.1287)
383565200	3.30 (0.1299)
383575200	3.33 (0.1311)
383585200	3.36 (0.1323)
383595200	3.39 (0.1335)
383605200	3.42 (0.1346)
383615200	3.45 (0.1358)
383625200	3.48 (0.1370)
383635200	3.51 (0.1382)
383645200	3.54 (0.1394)
383655200	3.57 (0.1406)
383665200	3.60 (0.1417)
383675200	3.63 (0.1429)
383685200	3.66 (0.1441)

3) Install the selected pinion height adjusting washer on drive pinion, and press the rear bearing cone into position with ST.
ST 398177700 INSTALLER

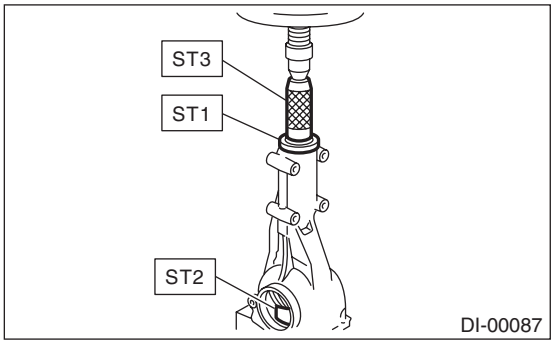


4) Insert the drive pinion into the differential carrier, and install the preselected bearing preload adjusting spacer and washer.

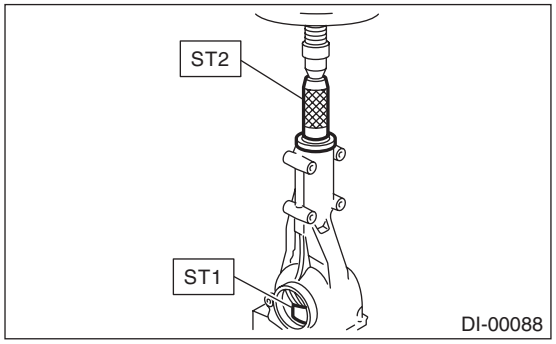


(A) Drive pinion
(B) Bearing preload adjusting spacer
(C) Bearing preload adjusting washer
(D) Differential carrier

5) Press-fit the front bearing cone into case with ST1, ST2 and ST3.
ST1 398507703 DUMMY COLLAR
ST2 399780104 WEIGHT
ST3 899580100 INSTALLER

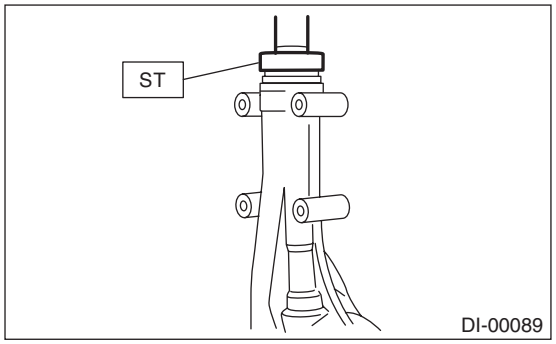


6) Insert the spacer, then press-fit the pilot bearing with ST1 and ST2.
ST1 399780104 WEIGHT
ST2 899580100 INSTALLER



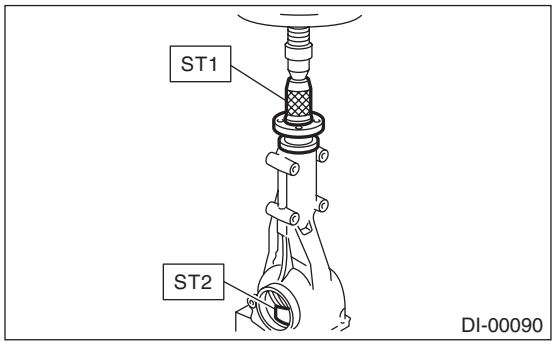
7) Fit a new oil seal with ST.

NOTE:
• Press-fit until the oil seal end comes 1 mm (0.04 in) inward from end of carrier.
• Apply differential gear oil to the oil seal lips.
ST 498447120 INSTALLER



8) Press-fit the companion flange with ST1 and ST2.

NOTE:
Be careful not to damage the bearing.
ST1 899874100 INSTALLER
ST2 399780104 WEIGHT

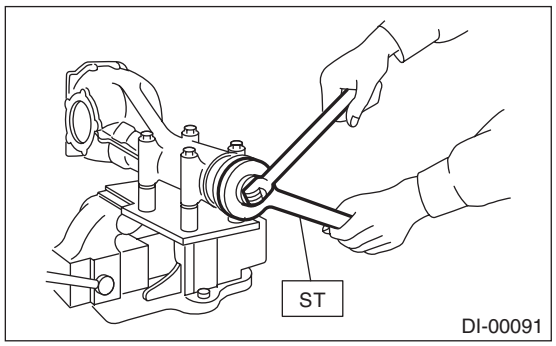


9) Apply seal material on the drive pinion shaft thread and new self-locking nut seat.

Seal material:
THREE BOND 1324 (Part No. 004403042) or equivalent

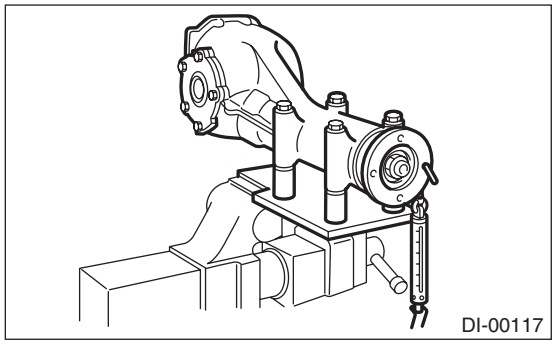
10) Attach new self-locking nuts, and tighten with the ST.
ST 498427200 FLANGE WRENCH

Tightening torque:
181.5 N·m (18.5 kgf-m, 133.9 ft-lb)

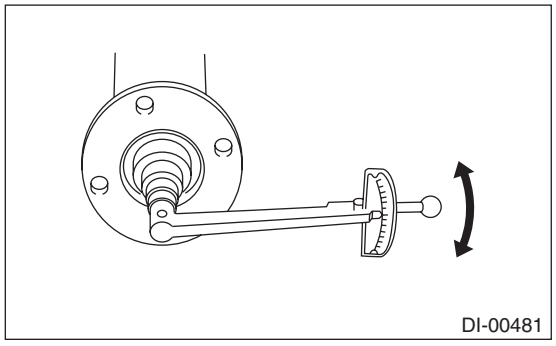


11) Check the initial torque or initial load.

Initial load:
17.7 — 38.8 N·m (1.8 — 4.0 kgf-m, 4.0 — 8.7 ft-lb)



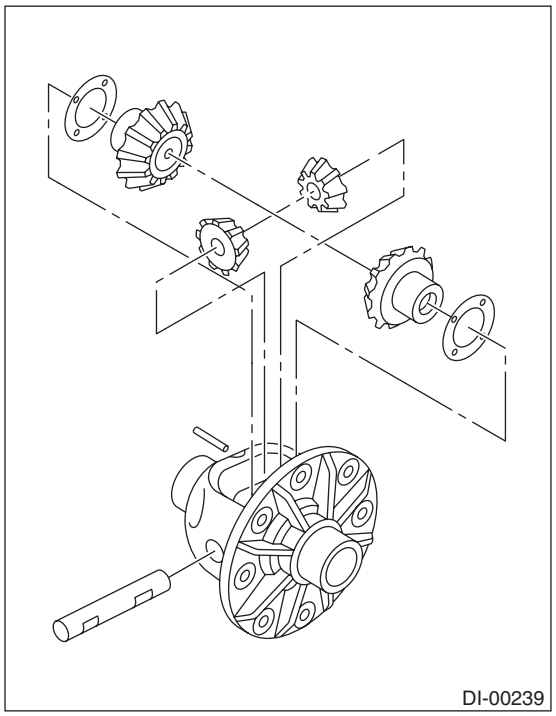
Initial torque:
0.67 — 1.47 N·m (0.07 — 0.15 kgf-m, 0.49 — 1.08 ft-lb)



12) Assembling differential case
Install the side gears and pinion mate gears, with their thrust washers and pinion mate shaft, into the differential case.

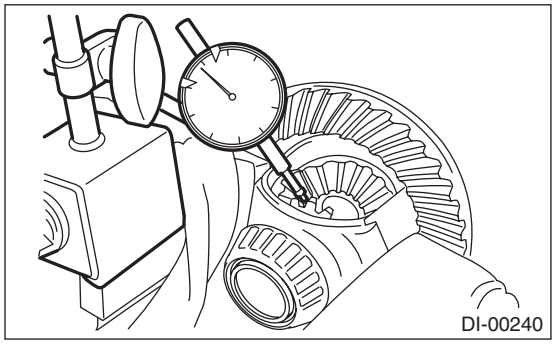
NOTE:
• Apply gear oil on both sides of the washer and on the side gear shaft before installing.

• Insert the pinion mate shaft into the differential case by aligning the lock pin holes.



(1) Measure the side gear backlash.

Side gear backlash:
0.10 — 0.20 mm (0.004 — 0.008 in)



(2) Adjust the backlash as specified by selecting side gear thrust washer.

Side gear thrust washer	
Part No.	Thickness mm (in)
383445201	0.75 — 0.80 (0.0295 — 0.0315)
383445202	0.80 — 0.85 (0.0315 — 0.0335)
383445203	0.85 — 0.90 (0.0335 — 0.0354)

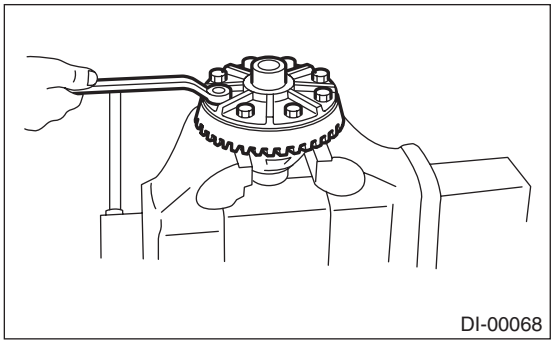
(3) Check the condition of rotation after applying oil to the gear tooth surfaces and thrust washer surfaces.
(4) After inserting the pinion shaft lock pin into differential case, stake the both sides of the hole to prevent pin from falling off.

13) Install the driven gear to the differential case.

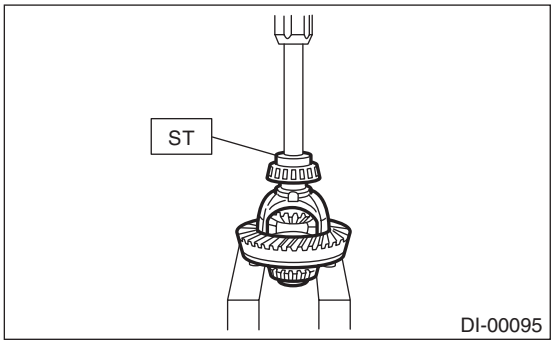
NOTE:
• Before installing bolts, apply seal material to bolt threads.

Seal material:
THREE BOND 1324 (Part No. 004403042) or equivalent
• Make sure there is no clearance between the differential case and driven gear.
• Tighten opposing bolts in order.

Tightening torque:
103 N·m (10.5 kgf-m, 76.0 ft-lb)

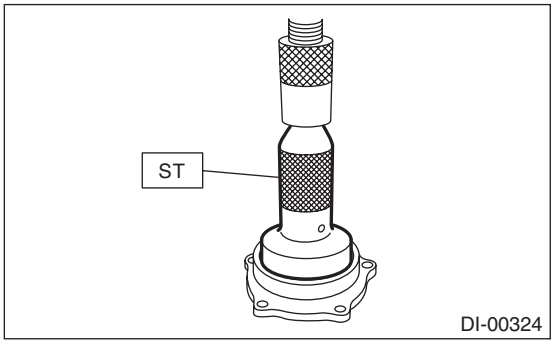

DI-00068

14) Press the side bearing into differential case using ST.
ST 398487700 DRIFT



DI-00095

15) Press the side bearing outer race into the side retainer using the ST.
ST 398417700 DRIFT

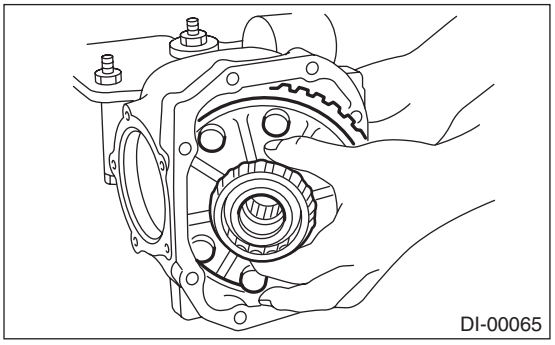


DI-00324

16) Side retainer shim adjustment
(1) The driven gear backlash and side bearing preload can be adjusted by the side retainer shim thickness.

(2) Install the differential case assembly into differential carrier in the reverse order of disassembly.

NOTE:
Be careful not to hit the hypoid driven gear teeth against the case.


DI-00065

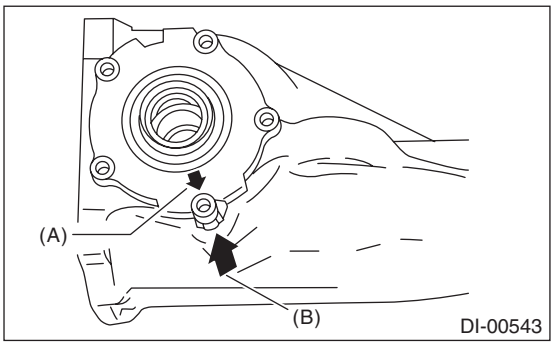
(3) Install the side retainer shims and O-ring to retainers RH and LH on which they were installed.

NOTE:
• Replace the O-ring with a new part.
• Replace broken or corroded side retainer shims with a new part of the same thickness.

Side retainer shim	
Part No.	Thickness mm (in)
383475201	0.20 (0.0079)
383475202	0.25 (0.0098)
383475203	0.30 (0.0118)
383475204	0.40 (0.0157)
383475205	0.50 (0.0197)

(4) Align the arrow mark on the differential carrier with the arrow mark on the side retainer during installation.

NOTE:
Be careful that side bearing outer race is not damaged by the bearing roller.

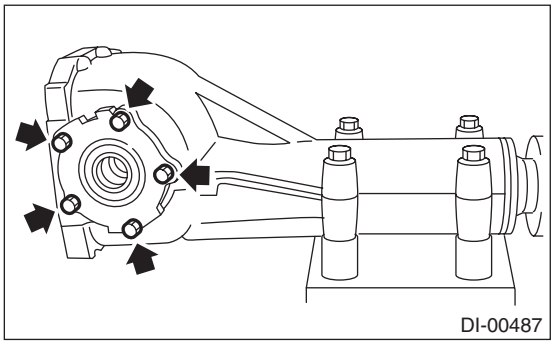


DI-00543

(A) Arrow mark (on the side retainer)
(B) Arrow mark (on the differential carrier)

(5) Tighten the side retainer bolts.

Tightening torque:
10.5 N·m (1.1 kgf-m, 7.7 ft-lb)



(6) Measure the hypoid driven gear to drive pinion backlash. Set the magnet base on differential carrier. Align the contact point of dial gauge with tooth face of hypoid driven gear, and move hypoid driven gear while holding drive pinion still. Read the value indicated on dial gauge. If the backlash is outside the standard range, adjust the side retainer shim by the following method.

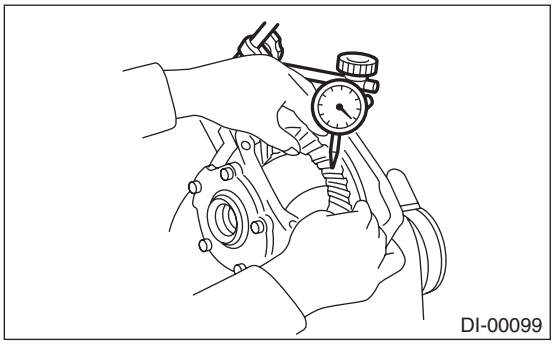
•When backlash is less than 0.1 mm (0.004 in):

Reduce the thickness of shim on the back side of the hypoid driven gear and increase the thickness of shims on the teeth side of the hypoid driven gear.

•When backlash exceeds 0.2 mm (0.008 in):

Increase the thickness of shim on the back side of the hypoid driven gear and reduce the thickness of shims on the teeth side of the hypoid driven gear.

Backlash:
0.10 — 0.20 mm (0.004 — 0.008 in)

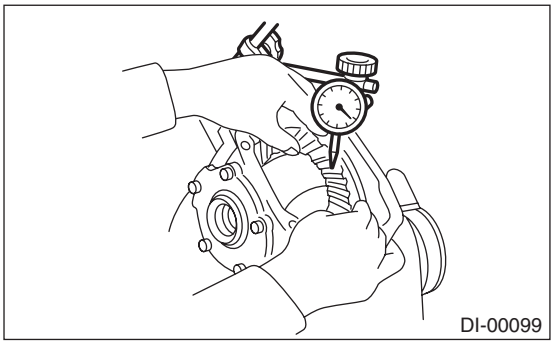


(7) At the same time, measure the total preload of the drive pinion. Compared with the resistance when differential case is not installed, if the total preload is not within specification, adjust the thickness of side retainer shims, increasing/reducing both shims by an even amount at a time.

Total preload:
20.7 — 54.4 N (2.1 — 5.5 kgf, 4.7 — 12.2 lbf)

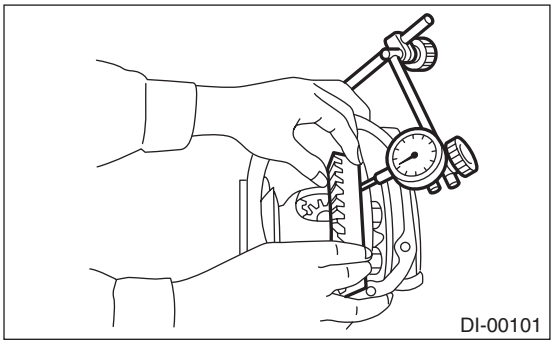
17) Recheck the hypoid driven gear to drive pinion backlash.

Backlash:
0.10 — 0.20 mm (0.004 — 0.008 in)



18) Check the runout on the back side of the hypoid driven gear, and make sure that the pinion and hypoid driven gears rotate smoothly.
If the runout on the back side of the hypoid driven gear exceeds the specification, check for any foreign material between the hypoid driven gear and differential case, and for any deformation of the case or gear.

Hypoid driven gear back surface runout:
0.05 mm (0.002 in)



19) Checking and adjusting the tooth contact of hypoid driven gear

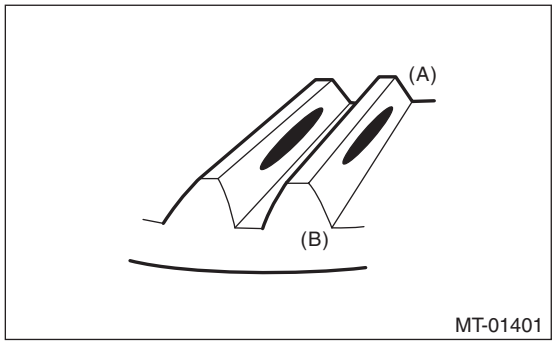
(1) Apply lead-free red dye evenly on the both sides of three to four teeth of the hypoid driven gear. Check the contact pattern after rotating the hypoid driven gear several revolutions back and forth until a definite contact pattern appears on the hypoid driven gear.

(2) When the contact pattern is not correct, readjust.

NOTE:
Be sure to wipe off the lead-free red dye completely after the adjustment is completed.

• Correct tooth contact

Check item: Tooth contact pattern is slightly shifted toward toe side under no-load rotation. (When driving, it moves towards the heel side.)

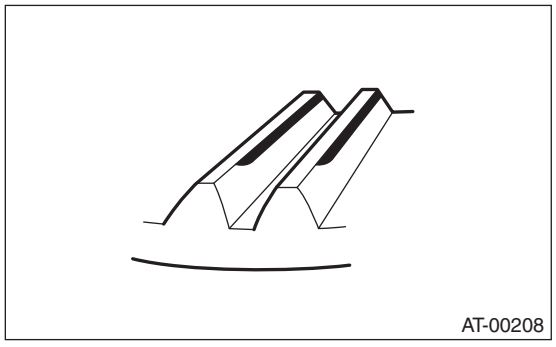


(A) Toe side
(B) Heel side

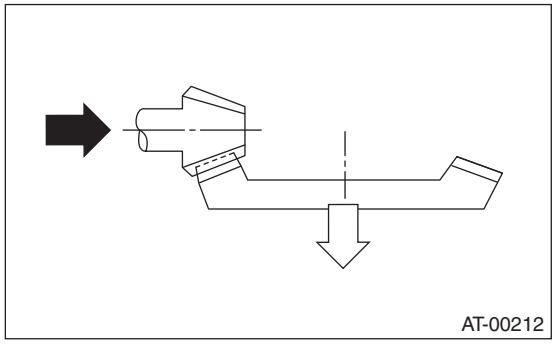
• Face contact

Check item: Backlash is too large.

Contact pattern



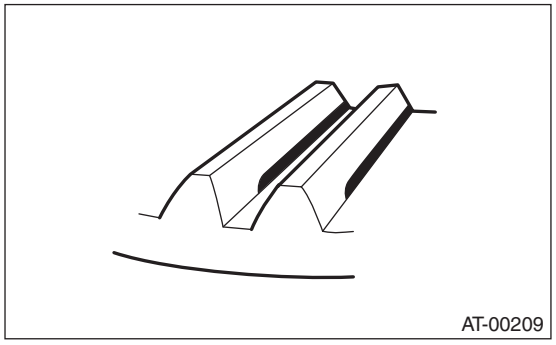
Corrective action: Increase thickness of pinion height adjusting washer according to the procedure for bringing drive pinion close to hypoid driven gear side.



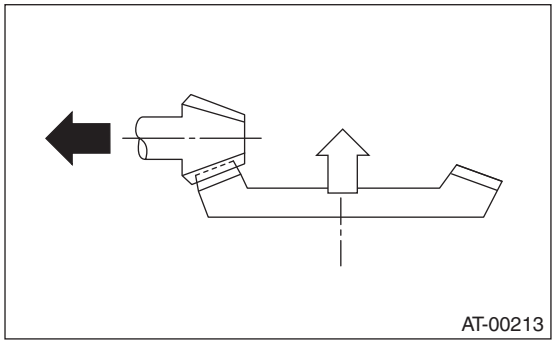
• Flank contact

Check item: Backlash is too small.

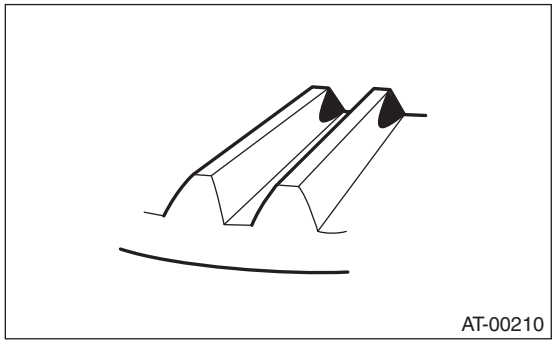
Contact pattern



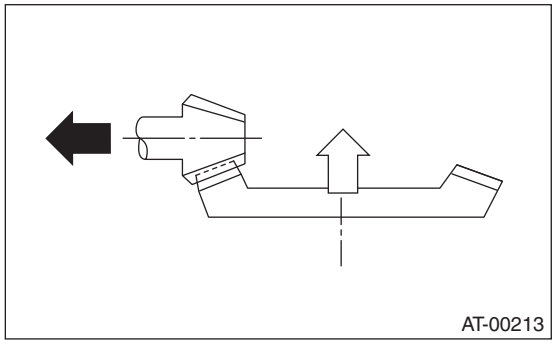
Corrective action: Reduce the thickness of pinion height adjusting washer according to the procedure for bringing drive pinion away from hypoid driven gear.



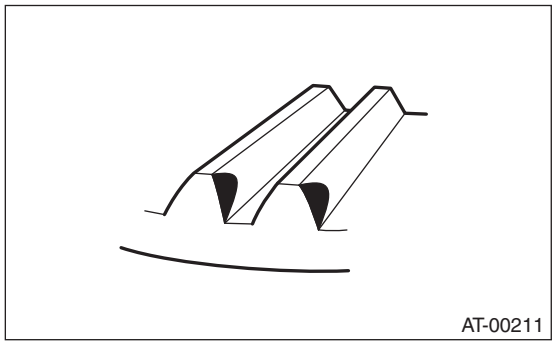
• Toe contact (inside contact)
Check item: Teeth contact area is too small.
Contact pattern



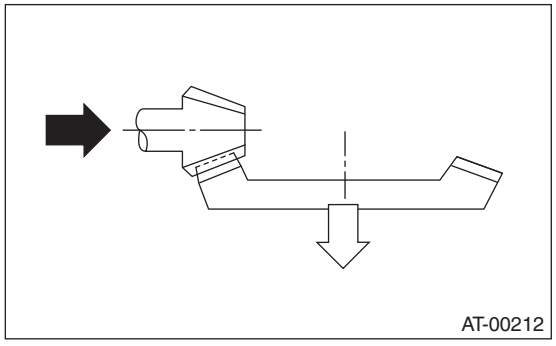
Corrective action: Reduce the thickness of pinion height adjusting washer according to the procedure for bringing drive pinion away from hypoid driven gear.



• Heel contact (outside end contact)
Check item: Teeth contact area is too small.
Contact pattern

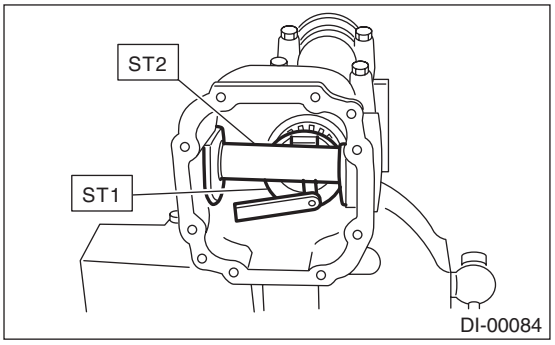


Corrective action: Increase thickness of drive pinion height adjusting washer in order to bring the drive pinion closer to the hypoid driven gear.



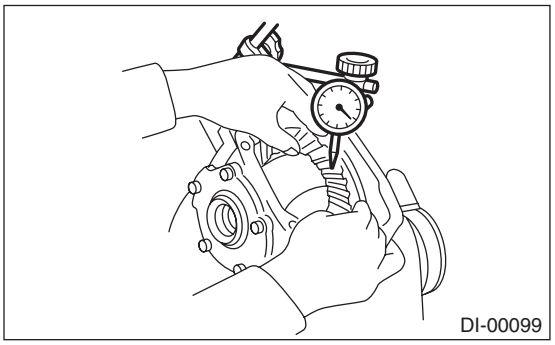
20) If proper tooth contact is not obtained, once again adjust the drive pinion height by changing the RH and LH side retainer shims and the hypoid gear backlash.
(1) Drive pinion height

ST1	398507702	DUMMY SHAFT
ST2	398507701	DIFFERENTIAL CARRIER GAUGE



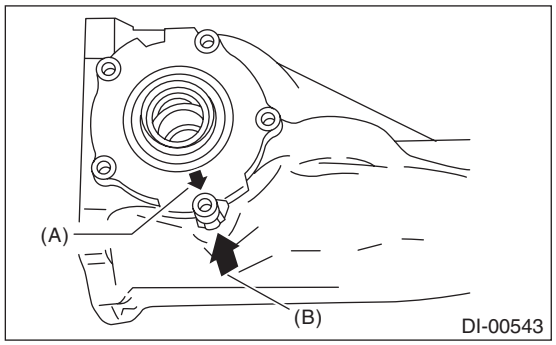
T = To + N – (H × 0.01) – 0.20 mm (0.008 in)
Place:
T = Thickness of pinion height adjusting washer mm (in)
To = Thickness of washer temporarily inserted mm (in)
N = Clearance of thickness gauge mm (in)
H = Figure marked on drive pinion head
(2) Hypoid gear backlash

Backlash:
0.10 — 0.20 mm (0.004 — 0.008 in)



21) Remove the RH and LH side retainers.
22) Install new O-rings to the side retainers on both sides.
23) Install the oil seal to the side retainer of both sides. <Ref. to DI-38, REPLACEMENT, Rear Differential Side Oil Seal.>

24) Align the arrow mark on the differential carrier with the arrow mark on the side retainer during installation.

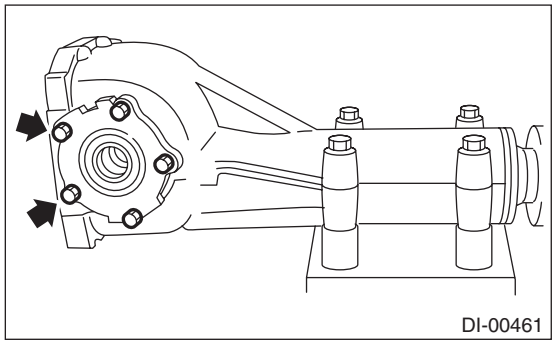


(A) Arrow mark (on the side retainer)
(B) Arrow mark (on the differential carrier)

25) Apply liquid gasket to the bolt with arrow marks and install the side retainer.

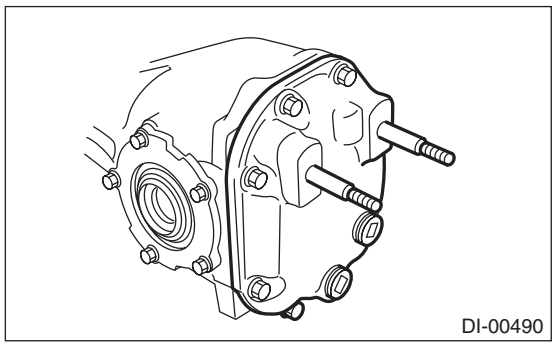
Liquid gasket:
THREE BOND 1110B (Part No. K0879Y0020) or equivalent

Tightening torque:
10.5 N·m (1.1 kgf-m, 7.7 ft-lb)

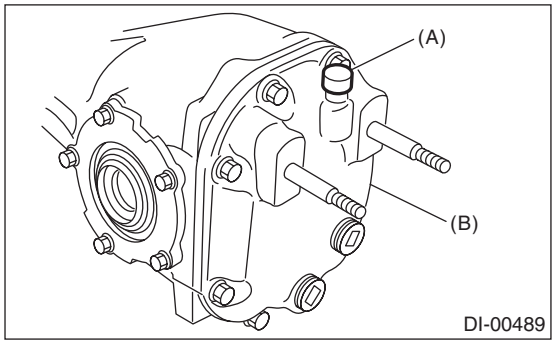


26) Install the new gasket and rear cover, and tighten the bolts to the specified torque.

Tightening torque:
29.5 N·m (3.0 kgf-m, 21.8 ft-lb)



27) Install the air breather cap.



(A) Air breather cap
(B) Rear cover

28) Install the oil drain plug.

Liquid gasket:
THREE BOND 1105 (Part No. 004403010) or equivalent

Tightening torque:
49 N·m (5.0 kgf-m, 36.1 ft-lb)

29) Install the oil filter plug.

E: INSPECTION

Wash all the disassembled parts clean, and examine them for wear, damage and other defects. Repair or replace the defective parts as necessary.

1) Hypoid driven gear and drive pinion

• If there is evidently an abnormal tooth contact, find out the cause and adjust until the teeth contact correctly. Replace the gear if there is an excessive worn or an incapable adjustment.

• If crack, cutout or seizure is found, replace the parts as a set. Slight damage of some teeth can be corrected by oil stone or the like.

2) Side gear and pinion mate gear

• Replace if cracks, scoring or other defects are evident on the tooth surface.

• Replace if thrust washer contact surface is worn or seized. Slight damages of the surface can be corrected by oil stones or equivalent.

3) Bearing

Replace if seizure, peeling, wear, rust, dragging during rotation, abnormal noise or other defect is evident.

4) Thrust washer of the side gear and pinion mate gear

Replace if seized, flawed, abnormally worn or having other defects.

5) Oil seal

Replace if deformed or damaged, and at every disassembling.

6) Differential carrier

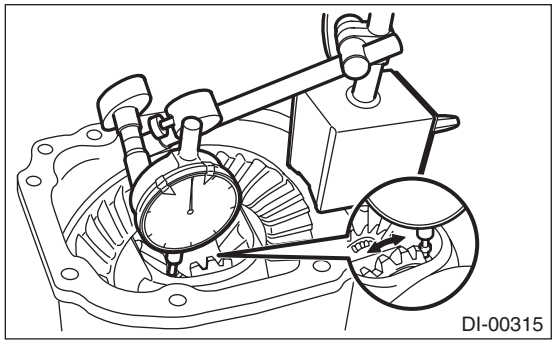
Replace if the bearing bores are worn or damaged.

7) Differential case
Replace if its sliding surfaces are abnormally worn, burned, or cracked.
8) Companion flange
Replace if the oil seal lip contact surface shows cracking.

1. SIDE GEAR BACKLASH

Using a dial gauge, check the backlash of side gear.

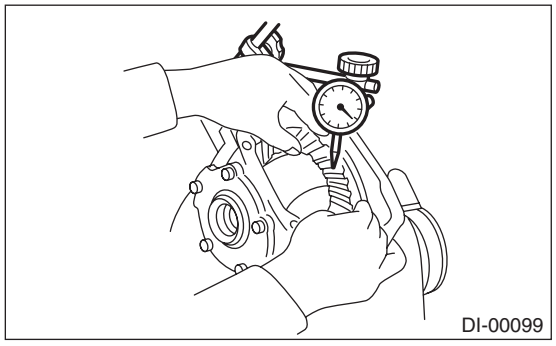
Side gear backlash:
0.10 — 0.20 mm (0.004 — 0.008 in)
If the side gear backlash is not within the specification, select the side gear thrust washer and adjust the side gear backlash as specified.


DI-00315

2. HYPOID DRIVEN GEAR BACKLASH

Using a dial gauge, check the backlash of hypoid driven gear.

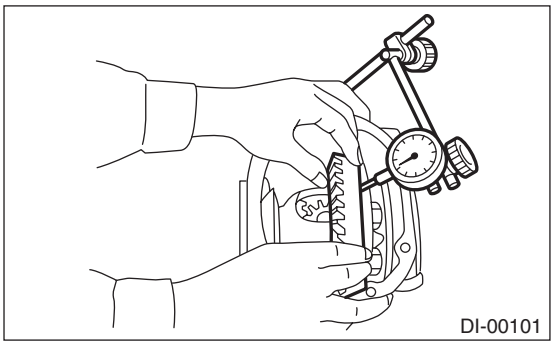
Hypoid driven gear backlash:
0.10 — 0.20 mm (0.004 — 0.008 in)
If the hypoid driven gear backlash is not within the specification, adjust the side bearing preload or repair if necessary.


DI-00099

3. HYPOID DRIVEN GEAR RUNOUT ON ITS BACK SURFACE

Using a dial gauge, check the hypoid driven gear back surface runout.

Hypoid driven gear back surface runout:
0.05 mm (0.002 in)
If the hypoid driven gear runout exceeds 0.05 mm (0.002 in), replace the hypoid driven gear.


DI-00101

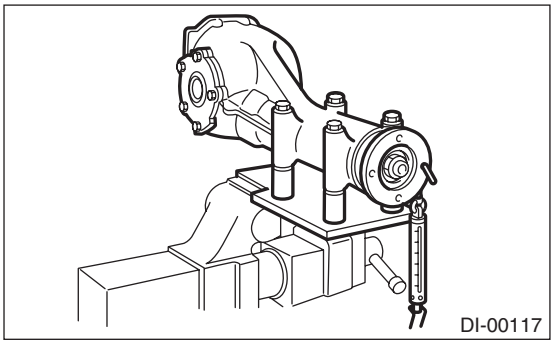
4. TOOTH CONTACT BETWEEN HYPOID DRIVEN GEAR AND DRIVE PINION

Inspect the tooth contact between the hypoid driven gear and drive pinion. <Ref. to DI-24, ASSEMBLY, Rear Differential.>

5. TOTAL PRELOAD

Using a spring scale, check the total preload.

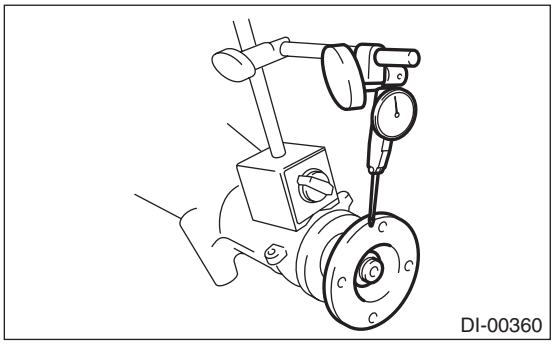
Total preload:
20.7 — 54.4 N (2.1 — 5.5 kgf, 4.7 — 12.2 lbf)
If the total preload is not within the specification, adjust the side retainer shim.


DI-00117

6. COMPANION FLANGE

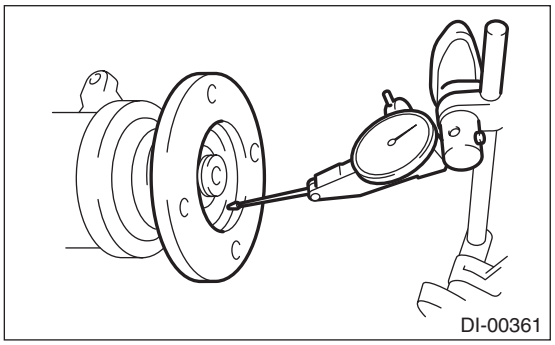
1) If rust or dirt is attached to the companion flange, remove them.
2) Set a dial gauge at a companion flange surface (mating surface of propeller shaft and companion flange), and then measure the companion flange runout.

Limit of runout:
0.08 mm (0.003 in)



3) Set the gauge inside of the companion flange, and measure the runout.

Limit of runout:
0.08 mm (0.003 in)



4) If either runout exceeds the limit, move the phase of companion flange and drive pinion 90° each, and find the point where the runout is within the limit.
5) If the runout exceeds the limit after changing the phase, replace the companion flange and recheck the runout.
6) If the runout exceeds the limit after replacing the companion flange, the drive pinion may be assembled incorrectly or bearing is faulty.

F: ADJUSTMENT

1. SIDE GEAR BACKLASH

Adjust the side gear backlash. <Ref. to DI-24, ASSEMBLY, Rear Differential.>

2. HYPOID DRIVEN GEAR BACKLASH

Adjust hypoid driven gear backlash. <Ref. to DI-24, ASSEMBLY, Rear Differential.>

3. TOOTH CONTACT BETWEEN HYPOID DRIVEN GEAR AND DRIVE PINION

Adjust the tooth contact between hypoid driven gear and drive pinion gear. <Ref. to DI-24, ASSEMBLY, Rear Differential.>

4. TOTAL PRELOAD

Adjust the side retainer shim. <Ref. to DI-24, ASSEMBLY, Rear Differential.>